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Large Federal Budget Deficits: Perspectives and Prospects

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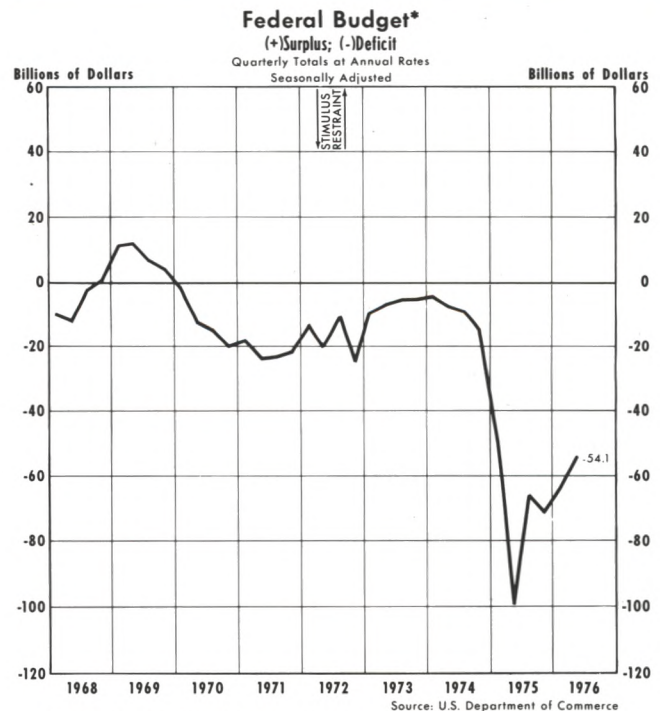
THE January 1975 Administration forecast of a \$52 billion deficit for fiscal 1976 generated considerable concern among the American people that the budget was “out of control.” This concern took the form of uncertainty regarding expected inflation and the future course of interest rates.

From early 1975 to the present, the Federal budget (national income accounts basis) has been in deficit, averaging \$67 billion on an annual rate basis.¹ At the same time, the pace of economic activity has been strong, showing an effective recovery from the recent recession. This combination of events since early 1975 — continuing large Federal deficits along with generally improving economic activity — has raised a number of questions about the role of fiscal policy in the U.S. economic system. Was the Federal deficit instrumental in promoting economic recovery, or did the recovery occur despite the deficit? What are the prospects for the future — is there no longer any need to worry about a large Federal deficit? Will it cause rising interest rates and/or lead to dislocations in the economy?

The Evolution of a Large Federal Deficit

Analysis of the role of Federal deficits in influencing the movements of economic activity over recent

¹Throughout this article all references to the size of the deficit are on an annual rate basis. Also, since figures for the official (sometimes called “unified”) budget are not available on a seasonally adjusted basis, most references are to the “national income accounts budget,” that is, the Federal sector of the national income accounts.



quarters requires first an understanding of exactly how the deficit came to be so large. Crucial to this understanding is the distinction between “active” and “passive” elements in the budget.

The active element in the Federal budget is defined as changes in receipts and expenditures that result from current legislation on the part of the

Congress. The reasons for this legislation depend on a whole host of factors involving the role of Government in promoting the general welfare of the public, and subsumed under this general objective are the economic goals of full employment, price stability, and economic growth. In other words, active elements in the budget include discretionary changes in Federal expenditures and tax rates—that is, those changes in the deficit which result from current Congressional and Executive action, or possible lack of action in the case of a program which is scheduled to expire.²

The passive element in the budget, on the other hand, refers to those changes in receipts and expenditures that occur in the presence of past legislation automatically and which reflect the effects of changes in economic activity. For example, Congress and the Administration determine tax rates, and the amount of receipts collected depends on the level of income, profits and spending.³ In addition, unemployment insurance laws are written so that benefits automatically change in response to changes in economic activity. This feedback of economic activity on the budget is defined here as the “passive” aspect of the deficit.

To aid in the analysis of the factors which have contributed to the current deficit situation, the first half of 1974 is used as a reference point. In early 1974, the Federal budget was in deficit at an annual rate of \$5.9 billion, whereas in the first half of 1976 the annual rate of deficit averaged \$59 billion. To what extent did active and passive elements come into play as the budget deficit ballooned by \$53 billion?

As any analyst of current economic developments can testify, the period from early 1974 to the first half of 1976 encompasses a wide variety of economic events. Even though the recession began in late 1973, it was not until late 1974 that it took on the appearance of an aggregate demand-induced recession of

²As will become apparent later, defining the active part of the budget is much easier than developing an operational measurement of it. Even though appropriations for most projects and programs (for example, social security might be considered “permanent” in nature) have to be approved in full for any given fiscal year, there is little question that Government programs, once started, have a momentum of their own, and Congressional and Executive action is probably less than “fully” discretionary.

³Each of these items reflects the pace of economic activity, but with different taxes (at the Federal level) the bases for these taxes also differ. Most personal taxes are based on income, social security taxes on earnings, corporate taxes on profits, and excise taxes on spending for particular items.

the type experienced in past periods of U.S. history. Federal receipts did not begin to deteriorate until fourth quarter 1974, but once they started to decline, the descent continued through second quarter 1975.⁴ Receipts then rebounded but expenditures rose even more, and the budget registered a deficit of \$66 billion at an annual rate in third quarter 1975. The deficit has hovered near \$60 billion through the first half of 1976.

Table I indicates what the Federal budget position for the first half of 1976 most likely would have been if the economy had continued to operate at or near 5 percent unemployment and the expenditure and revenue relationships of first half 1974 had been maintained.⁵ This is labeled Conditional Budget A. In other words, given the schedule of tax rates as of early 1974 and the amount of Government expenditures relative to the size of the economy, the budget would have been in surplus by \$1.9 billion in early 1976 if the economy had been at or near 5 percent unemployment.

Table I

Conditional Budget A — First Half 1976*

(Billions of Dollars)

Receipts	\$364.6
Expenditures	362.7
Net Position	\$ 1.9

*Hypothetical Federal budget in first half 1976 given revenue and expenditure relationships of first half 1974 and assuming 5 percent unemployment.

But, of course, during the early 1974 to early 1976 period the economy did not stay at 5 percent unemployment, nor did revenue and expenditure relationships remain constant. Table II gives another conditional budget which allows for *only* the effect on the budget of changed revenue and expenditure relationships during this two-year period. Moving from Table I (Conditional Budget A) to Table II (Conditional Budget B) thus provides an attempt to measure the *active* aspect of the budget from early 1974 to early 1976. Conditional Budget B, based on changed tax laws and the relative size of Govern-

⁴The period of deterioration in receipts is confused somewhat by the tax cuts that took place in second quarter 1975. However, estimates of the amount of the tax cut indicate that, even without the tax cut, Federal receipts would have declined or at best increased only slightly in that quarter.

⁵Note that this definition of high-employment differs from the more common assumption of 4 percent. Structural changes in the labor force in recent years have apparently worked in the direction of raising the minimum level of unemployment that is considered consistent with relative price stability.

Table II

Conditional Budget B — First Half 1976*
(Billions of Dollars)

Receipts	\$ 354.1
Expenditures	373.4
Net Position	\$-19.3

*Hypothetical Federal budget in first half 1976, given actual revenue and expenditure relationships and assuming 5 percent employment.

ment expenditures as they actually occurred, but still assuming 5 percent unemployment, indicates a deficit of \$19.3 billion.

The actual budget for early 1976 is shown in Table III. The figures in this table, therefore, reflect not only discretionary fiscal actions (active element) but the effects of changes in the level of resource utilization (passive element) as well. A comparison of Table II (Conditional Budget B) with Table III (Actual Budget) provides a measure of the *passive* element in the budget during the two-year period ending in early 1976. The level of resource utilization operated to produce a large passive element in the deficit because unemployment averaged 7.5 percent in first half 1976 — well above an assumed “high-employment” level of 5 percent unemployment.

The information in Tables I through III is combined in Table IV to provide a summary of how the deficit in early 1976 came about. The effect of discretionary fiscal actions (active element) on the deficit is derived from a comparison of Tables I and II. The difference of \$21.2 billion between Budget A and Budget B means an active element of that amount between the 1974 and 1976 periods.⁶ This active

⁶Whether the active part of the budget is classified as stimulus or restraint depends on one’s interpretation of how the budget influences economic activity and how the deficit (or surplus) is financed. In general, most observers consider a positive active element as a stimulus to total spending, and a negative active element as a restraint on total spending. The procedure followed here is to define stimulus and restraint with reference to the growth of potential GNP. For example, if Federal expenditures (other than automatic changes in unemployment benefits) grow faster than potential GNP, this is classified as fiscal stimulus. Potential GNP is defined as that GNP consistent with 5 percent unemployment of the labor force. It should also be noted that the estimate of the amount of fiscal stimulus depends on the period used as a reference point. If some period other than first half of 1974 were used, the estimate of fiscal stimulus would be different than \$21.2 billion.

Quite independent of the problem of measuring fiscal stimulus, there is the question of defining potential GNP. For additional discussion of how to define and measure economic potential, especially to the extent that recent disruptive events have had a bearing on these questions, see Denis S. Karnosky, “The Link Between Money and Prices — 1971-76,” this *Review* (June 1976), pp. 17-23.

Table III

Actual Budget — First Half 1976
(Billions of Dollars)

Receipts	\$ 320.6
Expenditures	379.5
Net Position	\$-58.9

part of the budget took the form of reduced tax rates (amounting to \$10.5 billion as measured against potential GNP in early 1976) and expenditure growth \$10.7 billion) above the trend growth of potential GNP (measured in nominal terms).

The economic activity effect (passive element), as shown in Table IV, is derived from a comparison of Budget B and the actual budget. This economic activity effect amounted to \$39.6 billion with \$33.5 billion attributable to the effect of relatively sluggish economic activity on tax receipts and the remainder to the effect of induced expansion of expenditures (mainly unemployment compensation).⁷

Table IV

Summary of Factors Contributing to the Budget Deficit in First Half 1976
(Billions of Dollars)

Receipts		\$-44.0
Discretionary Effect	\$-10.5	
Economic Activity Effect	-33.5	
Expenditures		16.8
Discretionary Effect	10.7	
Economic Activity Effect	6.1	
Receipts Minus Expenditures		\$-60.8

Up to this point, an explanation has not been provided as to why the distinction between active and passive elements in the deficit is important. To aid in providing such an explanation, it is necessary to examine in greater detail the relationship between Federal deficits and the money supply.

Budget Deficits and the Money Supply

Research in recent years has established the importance of both monetary and fiscal actions in the

⁷Even though estimates are shown to the nearest tenth of a billion, these figures should be interpreted more casually. A rough guess would be that they are accurate within a range of plus or minus \$2 to \$3 billion.

determination of the pace of economic activity. Differences still exist as to their relative importance, but, in general, most analysts view monetary and fiscal policy as complements. The reason they are looked upon as complements is that, historically, the two policies have tended to move together in the same direction of either stimulus or restraint.

The relation between the Federal budget and the money supply is bidirectional in the sense that changes in the Federal budget position tend to affect money growth and changes in money growth influence the budget.⁸ The nature of this relationship is clarified by distinguishing between active and passive aspects of the budget.

Effect of Deficit on Money—Federal deficits tend to produce pressures for monetary expansion. Increased Federal borrowing, when added to the credit demands of the private sector, places upward pressures on interest rates. The monetary authority, however, can resist these pressures for a short period of time by buying Government securities. Thus, to the extent that “low” interest rates assume a role as an objective of the monetary authorities, deficit financing tends to accelerate the rate of monetary expansion. The degree to which any upward pressure on interest rates is counteracted by Federal Reserve actions is, of course, subject to the discretion of the monetary authority.

Instrumental in the determination of the extent to which a deficit places upward pressure on interest rates is the state of the economy, and, thus, the nature of the deficit. A predominantly active deficit, incurred when the economy is strong, provides additional demand for funds over and above the already sizeable credit demands of the private sector. In this instance there would tend to be substantial pressure on the Federal Reserve to monetize a portion of the deficit in an effort to hold interest rates down.

On the other hand, a predominantly passive deficit, resulting from a slowdown in economic activity, generates little, if any, extra demand for funds because private sector borrowings are reduced during periods of declining or weak economic activity. In this case there would tend to be less pressure on interest rates (compared to an active deficit) because

⁸This section on the interaction of monetary and fiscal actions is not meant to be comprehensive. The emphasis here is on the relationship between money and budget deficits, which should not be interpreted as an exhaustive analysis of the interrelation between monetary and fiscal policy.

deficit financing would be replacing, rather than augmenting, private sector borrowing.⁹

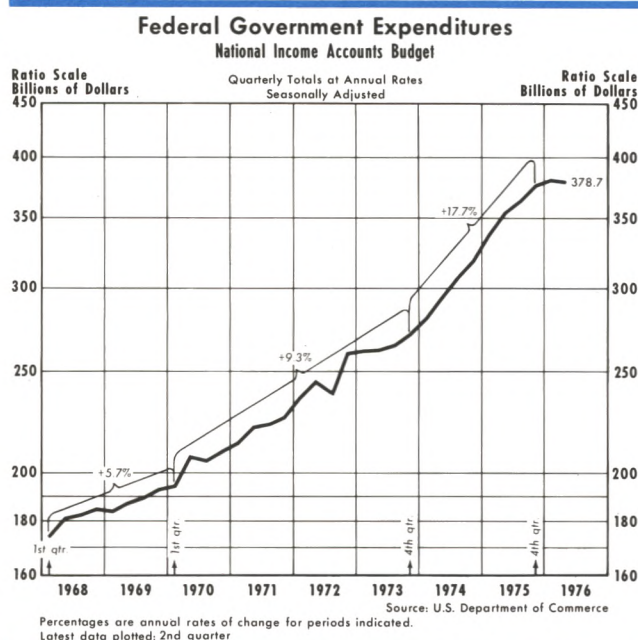
The economic consequences of a deficit depend on the proportions which are active and passive. And such considerations enter into the determination of proper monetary and fiscal actions to be taken for purposes of achieving national economic goals. In some economic circumstances, such as recession, an active deficit is considered by many analysts to be helpful in promoting higher production and employment, although there is some dispute as to the channels by which these stimulative effects operate. A passive deficit during recession, on the other hand, need not indicate net stimulus, because, given our tax and unemployment insurance laws, both receipts and expenditures are responding automatically to the movement of economic activity.

Effect of Money on Deficit—Another way that budget deficits (and surpluses) are interrelated with the money supply is of a longer-run nature. Research results show that monetary expansion has a relatively quick and long-lasting effect on nominal income, with initial effects on real output, and later effects on the price level.¹⁰ The effects of changes in monetary actions are translated into effects on the Federal surplus or deficit (which could be labeled as a passive response of the budget to monetary expansion) by way of nominal income. Since the base for most taxes in the Federal tax system is expressed in nominal terms, a faster growth in nominal income shows up quite quickly in a more rapid growth in Government receipts, even without any change in tax laws. In addition, with a progressive income tax, individuals are moved into higher tax brackets as income grows, resulting in higher effective tax rates in the aggregate.

Over a period of time, the rate of monetary expansion also affects the trend of Federal expenditures because the price of goods and services purchased by the Government moves up with everything else. Though the impact of monetary expansion (via inflation) on expenditure is probably delayed relative to that for receipts, it is just as real. There is some indication that this lag is being shortened, however,

⁹The assessment of the effects of deficits on interest rates also involves other factors. For example, also contributing to the behavior of interest rates in 1975-76 was the increased supply of credit, especially of a short-term nature.

¹⁰See, for example, Leonall C. Andersen and Keith M. Carlson, “A Monetarist Model for Economic Stabilization,” this *Review* (April 1970), pp. 7-25, and Leonall C. Andersen and Denis S. Kamosky, “The Appropriate Time Frame for Controlling Monetary Aggregates: The St. Louis Evidence,” in *Controlling Monetary Aggregates II: The Interpretation*, Conference sponsored by Federal Reserve Bank of Boston, Melvin Village, New Hampshire (September 1972), pp. 147-177.



as more indexation has been built into the Government expenditure process.

Recent Experience — In assessing the role of the Federal deficit in the economic experience of the last year and a half, it is useful to examine data on Federal Reserve holdings of Federal debt. In early 1974, Federal Reserve holdings were 23.4 percent of the Federal debt held by the public, and have since declined to 19.6 percent in the second quarter of 1976. This sharp reversal of trend requires further explanation.

It is impossible to assess the consequences of a budget deficit without making explicit the assumptions about the way in which it is financed. And some clues about the method of financing can be gleaned from a decomposition of the deficit into its active and passive components. Furthermore, an examination of future prospects for the size of the Federal deficit requires explicit assumptions about the rate of monetary expansion mainly because of its influence on Federal receipts via the growth of nominal income.

The experience of the last year and a half has provided ample evidence in support of the notion that what matters in influencing the way in which the deficit is financed are the conditions under which the deficit occurs. The seemingly persistent occurrence of deficits in the neighborhood of \$60 billion has not wreaked havoc on the U.S. economy.¹¹ Probably the

¹¹There are some who would question the validity of this statement from the standpoint of increased Government control and regulation during this period. The emphasis in this article is on the effect of the deficit, not the implica-

primary reason that the initially-forecast dire consequences of this large deficit have not come about is that the deficit has been predominantly passive rather than active. The job of keeping monetary expansion moderate was made relatively easy because a large portion of the deficit was of a passive nature; that is, increased Government demand for funds was offset by reduced demands by the private sector. As a result, there was little upward pressure on interest rates. In contrast to an active deficit, a passive deficit places less pressure on interest rates and thereby provides the monetary authority with greater flexibility in its attempts to achieve the goals of full employment with relative price stability.

The mere fact that this large deficit did not seem to cause great difficulty for the economy should not be interpreted to mean that large deficits are innocuous and no cause for concern in economic stabilization. The important thing to realize is that the possible impact of a Government deficit has to be viewed within the context of the prevailing economic climate. A \$60 billion deficit could inflict great harm to the economy under a different set of circumstances. An active deficit during periods of high resource utilization places upward pressure on interest rates, and to the extent that the monetary authority resists these pressures, the money supply expands more rapidly, with the eventual result being inflation.¹²

Conclusions

The Federal budget continues in deficit at an annual rate of near \$60 billion. From the standpoint of economic stabilization, such a deficit has not caused great harm for either financial markets or the economy as a whole because roughly two-thirds of it is attributable to relative weakness in economic activity (as measured by closeness to potential rather than the rate of advance). Recent experience appears to have demonstrated the importance of the way the deficit is financed. If financed by taxation or borrowing from the public, command over re-

tions of a growing Government sector. It is true that they are not independent, but concern about the size of Government should focus directly on expenditure growth rather than the deficit.

¹²The most obvious example of an active deficit causing trouble for the economy is the fiscal 1968 deficit of \$25.2 billion. Relative to the size of the economy then, that deficit was little different from the present one. But the consequences were much different because it occurred when the economy was operating at a high level of resource utilization. Most, if not all, of that deficit would be classified as active in nature. Furthermore, a large proportion of that deficit was monetized, that is, accompanied by rapid monetary expansion.

sources is shifted to the Government from the private sector so that inflation need not be a problem.¹³

To the extent that the active part of the deficit remains, the deficit poses an inflationary threat as the recovery continues and the economy moves back toward high employment. Consequently, the size of

the budget deficit carries little meaning by itself unless it is analyzed in terms of its active and passive elements. By doing so, the deficit is thereby related to current economic conditions and one is in a better position to formulate assumptions about the rate at which it is likely to be monetized.

¹³There is, however, a long-term problem that has not been mentioned heretofore. That is the effect of growing Government on the long-run productivity of the private sector.

To the extent the Government grows, even in the absence of accommodating monetary expansion, greater inflationary potential could be created via the effect on aggregate supply.



Economic Activity in Ten Major Industrial Countries: Late 1973 through Mid-1976

DONALD S. KEMP

SINCE the fall of 1973, the economies of each of the world's ten major industrial countries have been proceeding along individual business cycles that are unique to the post World War II era.¹ The recent cycles have been unique in that each has involved the deepest and most sustained declines in real output of the postwar era, and that each has been accompanied by some of the highest rates of inflation of this period. In addition, the similarities of the individual countries' experiences, and the coincidence of timing, suggest the possibility of common causality.

While much has been written regarding the performance of the U.S. economy during this period, comparative analyses of the performance of the economies of the major industrial countries have been relatively sparse. This article attempts to provide such an analysis, by reviewing and tracking the behavior of the most widely watched economic indicators for each of the ten major industrial economies. Indicators of the performance of real output, employment, unemployment, and inflation are traced for each country (when data permit) and, in the case of inflation, compared with a multi-country average. In addition, an attempt is made to analyze the behavior of the governments of the respective countries in terms of their fiscal and monetary policy actions over this period.

THE DOWNTURN

In the United States real gross national product (real GNP) registered its first decline of the latest

recession in the first quarter of 1974. Although there has been debate regarding the primary causes of this downturn, most economists agree that it was induced by a combination of supply constraints and attempts to reverse the pattern of increasing money supply growth that had been underway since late 1971.²

The same supply constraints that plagued the U.S. economy in the early 1970s have also effectively constrained productive capacity in many other countries. The supply constraints which are thought to have had the greatest impact during this period are: a four-fold increase in the price of petroleum, a primary input to the production process, and a temporary embargo on exports of this input to some countries; widespread crop failures; the cumulative impact of new environmental and safety programs; and the fact that adjustment to all of these shocks was restricted by a system of wage and price controls in various countries.³

In addition, attempts to reduce inflation, which was largely the result of excessive rates of money growth in previous years, were begun in most countries in early 1973.⁴ The data presented in Table I indicate that the rate of growth of the money supply was being reduced in each country, with the exception of Italy,

²This point of view is presented at length in Norman N. Bowsher, "Two Stages to the Current Recession," this *Review* (June 1975), pp. 2-8.

³A more detailed discussion of the impact of these factors on the economy is presented in Denis S. Karnosky, "The Link Between Money and Prices — 1971-76," this *Review* (June 1976), pp. 17-23.

⁴While it is widely recognized that the long-run solution to the inflation problem is a permanent decrease in the rate of growth of the money supply, it is also widely recognized that such efforts, if not undertaken gradually, frequently precipitate a temporary slowdown in economic activity.

¹For the purposes of this article, the world's ten major industrial countries include Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Switzerland, the United Kingdom, and the United States.

Table I

MONEY SUPPLY
(Seasonally Adjusted)

		<u>Belgium</u>	<u>Canada</u>	<u>France</u>	<u>Germany</u>	<u>Italy</u>	<u>Japan</u>	<u>Nether-lands</u>	<u>Switzer-land</u>	<u>U.K.</u>	<u>U.S.</u>
Two Quarter Moving Averages of Compounded Annual Rates of Change											
1971	III	11.7%	17.3%	10.6%	16.2%	19.4%	34.6%	13.2%	20.2%	8.7%	8.7%
	IV	13.4	16.6	10.7	11.6	19.0	30.2	12.5	18.6	18.0	4.7
1972	I	10.7	14.2	11.8	11.2	17.4	18.7	17.4	20.5	19.7	5.0
	II	12.5	9.4	13.8	13.9	19.7	17.8	20.9	13.1	16.5	7.9
	III	14.3	13.1	17.2	16.7	17.0	15.5	25.0	5.2	11.1	8.5
	IV	13.9	18.5	16.4	15.0	19.8	30.2	15.4	-0.2	12.6	8.9
1973	I	14.5	16.6	8.4	9.1	19.1	38.2	10.4	-4.6	9.2	8.4
	II	13.9	13.7	9.6	2.9	20.7	28.6	9.8	0.2	12.0	7.1
	III	9.3	13.8	9.2	-5.1	26.9	21.5	-7.4	0.8	5.5	6.1
	IV	8.0	10.0	7.3	-1.1	21.1	11.9	-6.8	0.9	3.1	5.4
1974	I	9.8	9.4	14.6	7.2	16.5	11.7	4.8	-3.4	3.5	5.7
	II	9.3	15.8	18.5	8.5	14.3	15.1	5.9	-3.7	-1.4	5.9
	III	6.1	6.8	4.4	10.8	10.7	12.3	7.0	0.3	13.8	5.0
	IV	7.7	-0.6	9.4	12.9	8.5	7.4	14.0	-2.1	25.9	4.2
1975	I	11.3	14.2	16.1	12.3	11.7	9.2	17.0	2.2	20.9	2.3
	II	13.4	18.5	4.3	14.2	3.2	10.1	22.6	6.0	19.5	4.1
	III	16.0	16.2	14.0	16.7	8.6	12.4	30.6	1.8	28.3	7.4
	IV	14.3	25.3	22.6	18.9	20.0	11.9	20.1	1.8	19.4	4.8
1976	I	10.9	12.5	21.4	13.3	N.A.	16.1	14.7	10.6	13.1	2.5
	II	10.5	-3.0	15.0	6.0	N.A.	17.0	N.A.	N.A.	14.2 E	5.6

E — Estimate

N.A. — Data Not Available

Sources: Bank of Canada, Bank of England, Bank of Japan, Board of Governors of the Federal Reserve System, Deutsche Bundesbank, International Monetary Fund, Organization of Economic Cooperation and Development

throughout 1973.⁵ In each case these decelerations represented a significant reversal of the accelerating trends which prevailed in previous years in the respective money stocks.

In other words, the same series of events which are believed to have precipitated the downturn in economic activity in the United States were occurring in the other major industrial countries at the same time. Therefore, it is more than a mere coincidence that real output in all of the major industrial countries began to falter in late 1973 and early 1974.

Real Output

The most widely monitored indicator of the performance of output is the rate of change of real GNP. The data presented in Table II indicate that, with the exception of Japan, sustained declines in real GNP

(declines lasting for two or more quarters) began at some time during 1974 in all of the major industrial countries.⁶ Japan is the only major industrial country that was spared a sustained decline in real GNP during the 1974-75 period. However, the Japanese economy did grow at rates far below its previous postwar trend rate throughout this period. In addition, Japan experienced a substantial decline in real GNP (at an 11.5 percent annual rate) in the first quarter of 1974 and another slight decline in the first quarter of 1975.

The exact timing, duration, and magnitude of the declines in real GNP did differ slightly among countries. The declines all began at some point during 1974 and had all ended by the third quarter of 1975. However, real GNP was simultaneously declining in all countries in the fourth quarter of 1974 (with the exception of Japan) and the first quarter of 1975. The duration of the declines varied from a minimum of

⁵The figures presented in Table I are two quarter moving averages of changes in the money supply measured on an annual rate of change basis. Two quarter average rates are used in this analysis to reduce the numerical significance of erratic, but inconsequential, short-term movements in money growth.

⁶It should be noted that there was also a contraction in real GNP in the United Kingdom between the second quarter of 1973 and the first quarter of 1974. However, in this article the analysis concentrates on the most recent downturn in real GNP.

Table II

		REAL GNP ¹							
		Belgium	Canada	France ²	Germany	Italy ²	Japan	U.K. ²	U.S.
		Compounded Annual Rates of Change							
1973	I	9.2%	14.2%	7.5%	12.2%	-3.8%	15.9%	23.7%	9.5%
	II	8.2	1.1	4.4	-0.3	16.8	7.3	-8.0	0.4
	III	5.1	4.6	3.7	1.4	10.2	0.4	-0.0	1.7
	IV	6.7	8.8	5.9	1.6	7.8	0.2	-3.7	2.1
1974	I	3.4	6.5	4.6	4.1	4.0	-11.5	-5.4	-3.9
	II	3.8	-3.7	3.2	-1.9	1.4	4.5	15.1	-3.1
	III	1.9	1.7	3.2	-1.3	-6.3	4.6	7.0	-2.6
	IV	-4.0	-1.7	-12.9	-6.5	-9.4	0.9	-5.9	-6.8
1975	I	-4.0	-1.4	-7.9	-11.2	-5.2	-1.0	-2.5	-9.9
	II	-8.0	2.7	4.9	1.1	-3.5	4.3	-9.2	5.6
	III	-5.3	6.3	-0.9	2.6	-0.6	3.5	-0.6	11.4
	IV	2.4	0.6	10.4	12.8	14.3	2.9	9.0	3.3
1976	I	4.3	11.1	N.A.	6.7	N.A.	14.7	11.1	9.2
	II	N.A.	0.0	N.A.	2.7	N.A.	3.1	N.A.	4.3

N.A. — Data Not Available

¹Quarterly Real GNP data are not available for the Netherlands and Switzerland.²Real Gross Domestic Product

Sources: Bank of Canada, Bank of England, Bank of Japan, Deutsche Bundesbank, Institut National de la Statistique et des Etudes Economiques, National Institute of Economic and Social Research, Organization for Economic Cooperation and Development, U.S. Department of Commerce, Université Libre de Bruxelles

two quarters in Canada to five quarters in both Italy and the United States. In addition, the simple percentage drop in the level of real GNP, measured from peak to trough, ranged from 1.3 percent in Canada to 6.6 percent in the United States (Canada, I/1974-I/1975 and U.S., IV/1973-I/1975).

Another measure of changes in real output is the change in the index of industrial production. This

index is a measure of the output of the manufacturing, mining, and utilities sectors of an economy.⁷ As indicated by Table III, industrial production registered sustained declines in all ten of the major industrial countries in 1974-75. In addition, the duration and

⁷Although there are some minor intercountry differences in the coverage of the industrial production index, these indices are roughly comparable from one country to another.

Table III

		INDUSTRIAL PRODUCTION INDEX									
		Belgium	Canada	France	Germany	Italy	Japan	Nether-lands	Switzer-land	U.K.	U.S.
		Compounded Annual Rates of Change									
1973	II	-2.4%	5.7%	-4.2%	1.1%	36.9%	14.9%	4.6%	-3.6%	-2.5%	5.8%
	III	2.5	0.0	3.4	0.0	17.6	7.2	9.6	3.8	3.3	4.1
	IV	13.2	10.1	-2.3	5.1	3.1	10.7	8.0	11.5	-2.5	2.5
1974	I	14.2	6.6	10.3	-1.4	13.0	-4.8	3.4	7.3	-18.9	-4.8
	II	-1.0	-1.3	2.3	-1.1	2.0	-10.3	-1.0	0.0	13.7	3.7
	III	-4.2	-2.6	5.6	-6.9	-10.2	-14.3	6.7	-10.1	1.1	2.5
	IV	-16.7	-6.6	-25.5	-13.7	-28.3	-21.9	-11.4	-13.7	-11.0	-20.1
1975	I	-14.1	-10.2	-12.0	-8.3	-1.4	-27.3	-10.6	-42.9	-1.5	-31.9
	II	-11.4	-2.1	-11.1	-6.3	2.9	13.1	-9.9	8.9	-17.1	3.6
	III	-13.1	-1.4	-1.4	1.2	-24.4	8.3	-8.2	4.3	-2.0	24.0
	IV	23.8	4.7	15.3	15.1	33.6	3.3	32.0	43.1	4.9	10.0
1976	I	22.0	11.3	22.7	11.7	10.8	25.2	3.4	-38.5	3.6	12.2
	II	21.3	7.7	3.4	11.4	N.A.	23.4	3.4	18.4	2.8	7.4

N.A. — Data Not Available

Sources: Bank of Canada, Bank of Japan, Deutsche Bundesbank, International Monetary Fund, Organization for Economic Cooperation and Development, U.S. Department of Commerce

Table IV

UNEMPLOYMENT RATE¹

		Belgium	Canada	France	Germany	Italy	Japan	Nether-lands	U.K.	U.S.
1973	I	2.8%	5.9%	2.1%	1.0%	4.0%	1.2%	2.7%	3.0%	4.9%
	II	2.8	5.5	2.1	1.1	3.9	1.4	3.0	2.7	4.8
	III	3.0	5.5	2.3	1.3	3.1	1.2	2.9	2.6	4.8
	IV	2.9	5.5	2.4	1.5	3.0	1.2	2.9	2.2	4.8
1974	I	2.9	5.4	2.4	1.9	3.1	1.3	3.1	2.5	5.0
	II	3.0	5.3	2.5	2.3	2.5	1.3	3.3	2.5	5.1
	III	3.3	5.3	2.6	2.9	2.8	1.4	3.7	2.7	5.6
	IV	3.8	5.6	3.4	3.5	3.2	1.7	4.0	2.7	6.7
1975	I	4.3	6.9	4.0	3.8	2.7	1.8	4.4	3.3	8.1
	II	5.2	7.2	4.6	5.2	3.8	1.8	4.9	3.7	8.7
	III	5.9	7.2	4.8	5.7	3.3	1.9	5.3	4.6	8.6
	IV	6.5	7.2	5.0	5.4	3.5	2.0	5.3	4.9	8.5
1976	I	6.4	6.8	5.0	4.7	3.2	1.9	5.4	5.3	7.6
	II	N.A.	7.2	N.A.	4.5	3.5	N.A.	N.A.	5.4	7.4

N.A. — Data Not Available

¹Unemployment Rates for Switzerland are not available.

Sources: De Nederlandsche Bank, U.S. Department of Commerce

magnitude of the declines were generally greater for this index than for real GNP. The duration of the declines varied from two quarters in the United States to six quarters in Belgium, Canada, and Germany. As was the case with real GNP, industrial production was declining simultaneously in all countries in the fourth quarter of 1974 and the first quarter of 1975. The simple percentage decline in this index, measured from peak to trough, ranged from 6.1 percent in Canada (over a period of six quarters) to 19.7 percent in Japan (over a period of five quarters). While economic activity did not undergo a sustained decline in Japan when measured in terms of real GNP, a sustained decline in industrial production was recorded.

Labor Market Conditions

Aside from the fact that a decrease in real output represents a reduction of the goods and services available for consumption or investment for future growth, such a decline is important because of the increase in unemployment that normally accompanies such a decline.⁸ While unemployment rates did attain abnormally high levels during the latest downturn in economic activity, the levels reached appear to be postwar records for only four countries — the Nether-

lands, the United Kingdom, Japan, and the United States.⁹ As indicated by the data in Table IV, unemployment rates began rising in each country (with the exception of Italy) during 1974. Although real output began to decline in Italy at about the same time as in other countries, the subsequent rise in the unemployment rate was delayed and did not begin until the second quarter of 1975.¹⁰

Another indicator of the effects of a decline in economic activity on the labor market is the rate of change in total civilian employment. As indicated by Table V, the experience with respect to this indicator has been quite varied. According to the available data, total civilian employment declined in each country for some time period during the 1974-75 downturn. The countries with the smallest declines in total employment from peak to trough were Italy and the United Kingdom, with simple percentage declines of only 1.6 percent.

Inflation

Another unique characteristic of the latest downturn in economic activity is the severity and diversity

⁹This observation is based on data found in selected issues of the United Nations' *Monthly Bulletin of Statistics*. However, since unemployment data for the 1950s are not available for Switzerland and France, this observation may not hold for those countries.

¹⁰This delay has been attributed in large part to an increase in the number of persons willing to accept partial unemployment (working less than thirty-three hours per week). See, OECD *Economic Surveys: Italy* (January 1976), pp. 12-15.

⁸While decreases in real economic activity are not the only causes of increases in the unemployment rate, such decreases are usually a major contributing factor. Unemployment could increase because of a decline or slowdown in the number of job openings, or because of a rapid increase in the number of persons seeking employment. It is only the first case which can be attributed to a decrease in economic activity.

Table V

TOTAL CIVILIAN EMPLOYMENT

		Belgium ¹	Canada	France ²	Germany	Italy	Japan	Nether- lands ³	Switzer- land ³	U.K.	U.S.
		Compounded Annual Rates of Change									
1973	II	1.3%	9.6%	1.2%	4.7%	4.5%	14.9%	0.0%	0.4%	1.6%	4.8%
	III	-6.7	0.0	3.2	3.1	11.4	0.8	0.0	-0.4	1.6	2.1
	IV	0.0	4.6	0.4	4.6	0.0	-2.3	0.0	-1.7	0.0	3.8
1974	I	5.8	4.6	-0.4	-4.4	-2.1	-13.0	-4.2	0.0	-3.2	2.5
	II	1.3	4.5	0.4	-1.5	2.2	17.6	0.0	3.9	3.3	0.7
	III	-13.4	4.5	2.4	0.0	4.3	-3.0	4.4	-1.3	1.6	0.5
	IV	-9.8	4.4	-1.6	-6.0	2.1	-5.2	-4.2	-7.7	-1.6	-3.1
1975	I	-28.3	-4.2	-4.3	-6.0	-4.1	-12.5	-8.4	-11.1	-3.2	-5.6
	II	-4.9	4.4	-3.5	-1.6	-2.1	20.6	-4.4	-13.8	0.0	0.6
	III	-24.5	0.0	-0.4	-1.6	6.5	0.8	-4.4	-12.6	0.0	3.3
	IV	0.0	4.4	-3.2	-1.6	0.0	-5.2	-4.5	-11.7	-1.6	0.5
1976	I	N.A.	-8.2	-2.8	N.A.	-8.1	-8.9	N.A.	-7.6	N.A.	5.6
	II	N.A.	N.A.	0.0	N.A.	N.A.	N.A.	N.A.	-0.5	N.A.	5.3

N.A. — Data Not Available

¹Due to the inavailability of Total Civilian Employment data, Employment in Mining and Manufacturing is used.

²Due to the inavailability of Total Civilian Employment data, Industrial Employment is used.

³Due to the inavailability of Total Civilian Employment data, Manufacturing Employment is used.

Sources: International Monetary Fund, Organization for Economic Cooperation and Development, U.S. Department of Commerce

among countries of the inflation rates that accompanied the declines in real output and increases in unemployment.¹¹ This round of inflation has also proven to be quite persistent relative to those experienced in the past.

As indicated by Table VI, with the exception of Germany and Switzerland, the rate of change in the consumer price index (CPI) has been in or near the double-digit range for much of the time since mid-1973.¹² This is also true for the average of all of the countries. Furthermore, while the inflation rates did begin to decline during the period of decreasing economic activity, they were still high by past standards.

In addition to being unusually high, the degree of divergence in inflation rates among countries has also been exceptionally large in the past few years. For example, between 1955 and 1970 inflation in these countries averaged 3.2 percent per year, with a standard deviation of 0.8. In contrast, between 1973 and 1975, inflation averaged 12.6 percent per year, with a

standard deviation of 4.5.¹³ Two major side effects of this large divergence in inflation rates have been the collapse of the fixed exchange rate regime and the continued existence of pressures favoring realignment of exchange rates. These side effects have occurred because it is neither possible nor desirable to prevent compensating movements in exchange rates in the face of differing rates of inflation among trading partners.¹⁴

POLICY RESPONSE TO THE DOWNTURN

As the downturn in economic activity began to take hold, governments were called upon to undertake countercyclical policy actions in an attempt to mitigate the depth of the decline. A substantial part of such actions typically take the form of changes in the rate of growth of the money stock and in government budget deficits. In order to gauge the response of governments to the latest downturn, two quarter moving averages of the rates of change in the money stock (M1) are presented in Table I, and Table VII shows the Federal budget deficits for each country as a percent of nominal GNP.

¹³The average annual rates of change in the CPI were computed for each country over each time period. The figures presented here are the arithmetic mean and the standard deviation of these average annual rates for all ten countries.

¹⁴This issue is discussed at length in Donald S. Kemp, "The U.S. Dollar in International Markets: Mid-1970 to Mid-1976," this *Review* (August 1976), pp. 12-14.

¹¹While the analysis which follows is couched in terms of changes in the consumer price index in each country, the same conclusions are reached if changes in the wholesale price index or GNP deflator are employed.

¹²The figures presented in Table VI are two quarter moving averages of changes in the CPI measured on an annual rate of change basis. As in the case of the money supply data, two quarter moving averages are used here to reduce the numerical influence of erratic, but inconsequential, short-term movements in the CPI.

Table VI

CONSUMER PRICE INDEX

		Belgium	Canada	France	Germany	Italy	Japan	Nether-lands	Switzer-land	U.K.	U.S.	Average
Two Quarter Moving Averages of Compounded Annual Rates of Change												
1973	I	7.9%	5.8%	6.2%	7.7%	11.1%	8.5%	8.8%	10.2%	7.6%	4.9%	7.9%
	II	7.0	8.6	5.9	7.9	12.2	17.1	9.6	8.8	7.6	7.5	9.2
	III	5.6	10.6	9.2	5.8	10.7	17.7	7.8	6.3	9.2	8.7	9.2
	IV	6.8	9.6	10.8	6.0	10.0	15.6	6.4	13.1	10.9	9.2	9.8
1974	I	11.5	8.8	13.5	9.1	16.9	32.0	9.8	14.7	15.5	11.2	14.3
	II	16.4	12.0	16.6	8.2	22.5	32.8	11.3	6.2	21.6	12.0	16.0
	III	17.9	13.3	15.6	5.2	26.8	18.1	10.0	6.8	18.8	11.8	14.4
	IV	15.7	12.0	13.5	4.6	29.1	17.1	10.5	11.4	15.5	12.3	14.2
1975	I	12.6	10.2	12.3	6.7	20.5	12.4	11.3	9.3	22.9	10.3	12.9
	II	11.5	8.9	10.8	7.9	12.0	10.6	10.2	5.6	34.2	7.2	11.9
	III	10.3	11.6	9.6	5.4	9.9	9.1	9.8	3.8	30.4	7.3	10.7
	IV	10.7	11.4	9.1	3.3	10.7	6.7	8.9	2.5	16.7	7.5	8.7
1976	I	10.3	7.0	9.6	5.3	14.3	9.3	8.2	2.2	13.4	5.6	8.5
	II	8.4	5.8	9.8	6.5	21.9	11.7	10.4	0.6	13.4	4.6	9.3

Sources: Bank of Canada, Bank of Japan, Deutsche Bundesbank, Organization for Economic Cooperation and Development, U.S. Department of Commerce

Reference to Table I indicates that there has been considerable intertemporal and intercountry variability in the rates of monetary expansion. However, with the exception of the United States, Switzerland, and Italy, the rates had clearly reversed their earlier downward trends by the first quarter of 1975. Since early 1973, when rates of monetary expansion began their pre-recession declines, the least expansionary countries have been Switzerland, Germany, and the United

States, with average annual rates of monetary expansion of 1.9, 8.7, and 5.1 percent, respectively. On the other hand, monetary expansion has been of double-digit magnitude, on balance, in all of the other countries over this period.

As indicated by the figures in Table VII, governments have generally pursued increasingly aggressive fiscal policies since the first quarter of 1973. In-

Table VII

NET FEDERAL BUDGET POSITION AS A PERCENT OF NOMINAL GNP

(+) Surplus; (—) Deficit
(Annual Rates)

		Belgium	Canada	France	Germany	Italy	Japan	U.K.	U.S.
1973	I	—8.79%	—1.06%	—1.16%	0.53%	—6.54%	—5.00%	2.89%	—2.99%
	II	—6.64	—0.64	0.31	0.12	—9.98	—0.01	—7.45	2.38
	III	2.55	0.88	—0.74	0.23	—9.87	0.82	—4.11	—0.32
	IV	0.38	0.65	4.22	—2.05	—12.71	—2.60	—6.14	—1.49
1974	I	—11.60	—2.81	0.60	0.38	—7.87	4.98	3.69	—2.06
	II	—5.78	0.51	3.21	—0.68	—9.21	—6.06	—5.70	2.78
	III	4.22	1.12	—1.39	—0.67	—10.56	1.17	—4.55	—0.44
	IV	0.10	—0.17	—0.80	—2.99	—9.27	—5.04	—11.48	—3.30
1975	I	—12.71	—4.38	—1.16	—2.53	—12.75	—3.13	—4.60	—4.99
	II	—6.93	—2.42	—1.78	—4.13	—13.01	—5.12	—10.60	—3.14
	III	—2.61	—2.64	—11.52	—2.42	—14.47	—2.60	—9.81	—4.78
	IV	1.02	—2.36	1.00	—3.94	N.A.	—8.46	—11.10	—6.69
1976	I	—14.90	—2.35	N.A.	—2.17	N.A.	—6.21	N.A.	—5.55
	II	N.A.	N.A.	N.A.	—2.43	N.A.	N.A.	N.A.	N.A.

N.A. — Data Not Available

¹Quarterly Nominal GNP data are not available for the Netherlands and Switzerland.

Sources: Bank of Canada, Bank of England, Bank of Japan, Deutsche Bundesbank, International Monetary Fund, Organization for Economic Cooperation and Development, U.S. Department of Commerce, Université Libre de Bruxelles

ingly aggressive fiscal policies, as the term is employed in this article, implies an acceptance of increases in budget deficit spending in an attempt to offset decreases in spending in the private sector. The acceptance of this variety of stimulation during the 1973-75 period is most noticeable in Germany, Italy, the United Kingdom, and the United States.

Thus, when policy response is measured in terms of either monetary or fiscal actions, the data indicate that governments responded actively to the most recent downturn in economic activity.

THE RECOVERY

By the fourth quarter of 1975, real GNP growth had resumed in each of the major industrial countries. Canada, Germany, and the United States all experienced turnarounds in output during the second quarter of 1975. While the Japanese economy has been spared a sustained decline in real GNP in recent years, the performance of that nation's economy in the second quarter of 1975 did represent a departure from the sluggish growth that that country had been experiencing in the previous two quarters. In the remaining countries, Belgium, France, Italy, and the United Kingdom, real GNP began to grow again during the fourth quarter of 1975.

An analysis of the rates of change in industrial production in each country also indicates that the rebound in economic activity occurred in mid- to late 1975. Industrial production reversed its previous sustained downward trend during the second quarter of 1975 in the United States, Japan, and Switzerland; the same event was observed in the third quarter in Germany. However, the reversal of the sustained downward trend in the other six countries did not occur until the fourth quarter of 1975.

While inflation continues to be a problem, substantial progress has been made in reducing it in almost all countries. The average rate of inflation for all ten countries fell below the double-digit level in the fourth quarter of 1975. However, there are some countries, particularly Italy and the United Kingdom, whose inflation rates are still of double-digit magnitude.

Although there has been an almost universal slowing trend in the rate of monetary expansion recently, the trend rate of money growth is still rapid by historical standards in all countries. Furthermore, because of the perpetuation of budget deficits that are also large by historical standards, indications are that monetary ex-

pansion will remain rapid for some time to come.¹⁵ These observations indicate that aggregate demand will remain strong in the near term. As a result, in most countries, continued reductions in inflation will most likely be slow in coming.

Of all the indicators analyzed in this article, the unemployment rate has proven to be the least affected by the upturn in economic activity. As of the first quarter of 1976, the unemployment rate was still at or very near its 1974-75 peak level in Belgium, France, Japan, the Netherlands, and the United Kingdom. Available data indicate that in the second quarter of 1976 the unemployment rate increased in Canada, Italy, and the United Kingdom, and fell in Germany and the United States. Of those countries which have experienced a drop in their unemployment rates since the recovery began, the United States has experienced the largest decline (1.3 percentage points on a quarterly average basis). Furthermore, only in the United States has total civilian employment risen above its pre-downturn level.

While these persistently high unemployment rates do represent a continuing source of concern to policymakers, they are consistent with other economic data and should not be surprising. Even though the recovery has been underway for some time in most countries, current real output is still generally below its previous peaks. For example, as of the second quarter of 1976, industrial production had not returned to its previous peak level in any of the major industrial countries. In addition, the latest available data indicate that real GNP was still below its previous peak level in Belgium, France, and Italy. In this regard, it seems reasonable to expect unemployment rates to remain relatively high, at least until output returns to its previous levels.

CONCLUSIONS

The world's ten major industrial countries are currently recovering from a slump in economic activity that was unique to the postwar era. It is widely agreed that this slump was abnormal in terms of the duration and magnitude of the declines in real output, the magnitude of the concurrent rates of inflation, and, in the case of Japan, the Netherlands, the United Kingdom, and the United States, the magnitude of the accompanying unemployment rates. However, while

¹⁵Implicit in this statement is a recognition of the link between fiscal actions and monetary policy. For a thorough discussion of this link, see Darryl R. Francis, "How and Why Fiscal Actions Matter to a Monetarist," this *Review* (May 1974), pp. 2-7.

there is some disagreement on the issue, many economists believe that this most recent world-wide downturn was unique in an even more fundamental sense. These analysts contend that supply constraints were a major factor contributing to the latest downturn. Because there has been very little experience with downturns of this nature, projections and policy prescriptions have been, and still are, particularly problematic.

If supply constraints were a major factor contributing to this downturn, it may be that a continuation of the current recovery depends to a great extent upon the speed with which the individual economies are able to adjust to these constraints, rather than upon the use of the traditional tools of stimulative fiscal and monetary policies.

If this is the case, then the near-term policy options are clear. On the one hand, aggressive application of stimulative monetary and fiscal policies could be employed to speed up the recovery. Unfortunately, if the supply constraints are real and continuing, the recov-

ery would then be shortlived. Many of the same bottlenecks that contributed to the 1974-75 downturn would soon become effective, and the result would be a resurgence of inflation. The resulting attempts to curtail the inflation would run the risk of precipitating another downturn shortly thereafter.

On the other hand, more moderate applications of stimulative monetary and fiscal policies could be employed to provide a slower, but longer-lasting, recovery. A steady gradual recovery would stimulate the reallocation of resources called for by the changes which have occurred on the supply side of the market, yet would minimize the risk of rekindling inflation. Such policies could be supplemented by government actions to remove constraints on production and encourage capital formation. Programs of moderate and steady stimulation, combined with an improved productive atmosphere, would be conducive to a prolonged economic expansion and a gradual reduction of the rate of inflation in each country.

